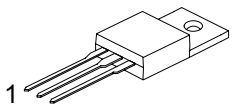
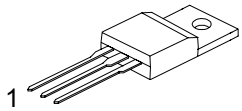
2SC5353

NPN SILICON TRANSISTOR

HIGH VOLTAGE NPN TRANSISTOR



TO-220



TO-220F

*Pb-free plating product number: 2SC5353L

■ DESCRIPTION

Switching Regulator and High Voltage Switching Applications
High-Speed DC-DC Converter Applications

■ FEATURES

* Excellent switching times: t_R = 0.7μs$_{(MAX)}$, t_F = 0.5μs $_{(MAX)}$
* High collectors breakdown voltage: V_{CEO} = 800 V

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SC5353-TA3-T	2SC5353L-TA3-T	TO-220	B	C	E	Tube
2SC5353-TF3-T	2SC5353L-TF3-T	TO-220F	B	C	E	Tube

2SC5353L-TA3-T

(1)Packing Type
(2)Package Type
(3)Lead Plating

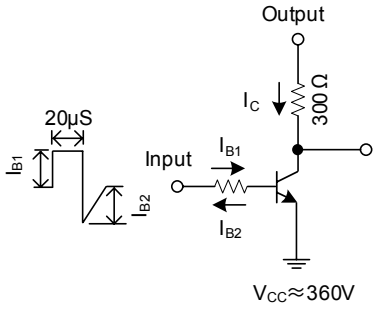
(1) T: Tube
(2) TA3: TO-220, TF3: TO-220F
(3) L: Lead Free Plating, Blank: Pb/Sn

■ ABSOLUTE MAXIMUM RATING (Tc = 25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	900	V
Collector-Emitter Voltage		V_{CEO}	800	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	3	A
	Pulse	I_{CP}	5	
Base Current		I_B	1	A
Collector Power Dissipation	Ta = 25°C	P_D	2.0	W
	T_C = 25°C		25	
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-40 ~ +150	°C

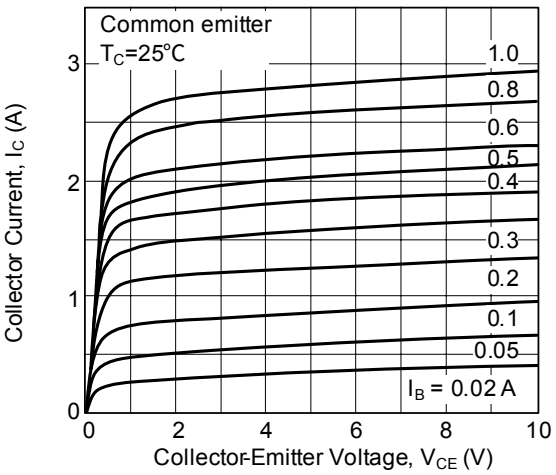
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Tc = 25°C)

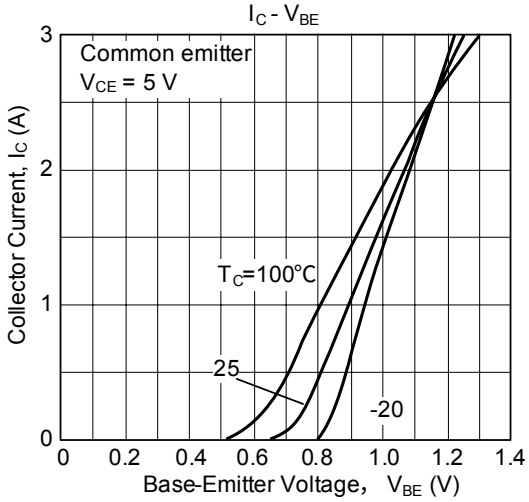
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage		BV_{CBO}	I_C=1 mA, I_E = 0	900			V
Collector-Emitter Breakdown Voltage		BV_{CEO}	I_C=10 mA, I_B = 0	800			V
Collector Cut-off Current		I_{CBO}	V_{CB}=720V, I_E= 0			100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=7V, I_C= 0			10	μA
DC Current Gain		$h_{FE(1)}$	V_{CE}=5 V, I_C=1 mA	10			
		$h_{FE(2)}$	V_{CE}=5 V, I_C=0.15 A	15			
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	I_C=1.2 A, I_B=0.45 A			1.0	V
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	I_C=1.2 A, I_B=0.24 A			1.3	V
Switching time	Rise time	t_R				0.7	μS
	Storage time	t_{STG}				4.0	
	Fall time	t_F	I_{B1} = 0.24 A, I_{B2} = −0.48 A, duty cycle ≤ 1%			0.5	

■ TYPICAL CHARACTERISTICS

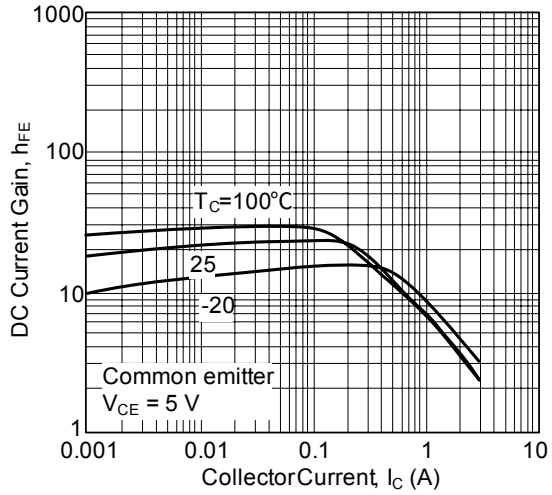
I_C - V_{CE}



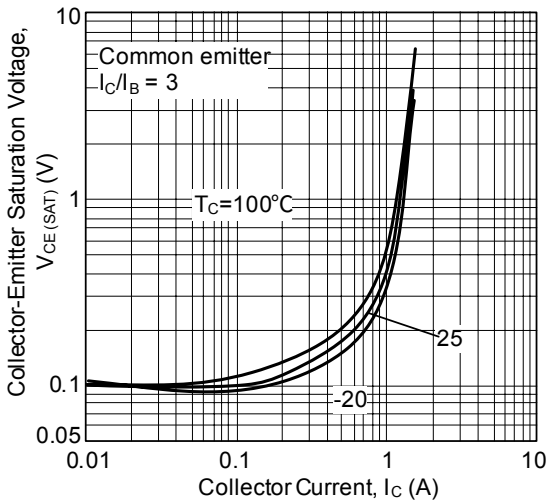
I_C - V_{BE}



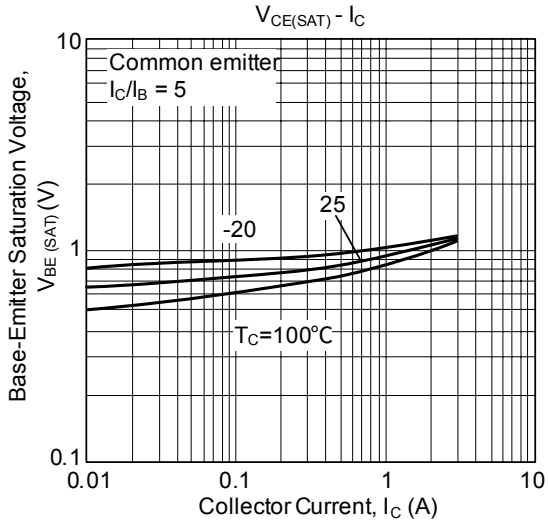
h_{FE} - I_C



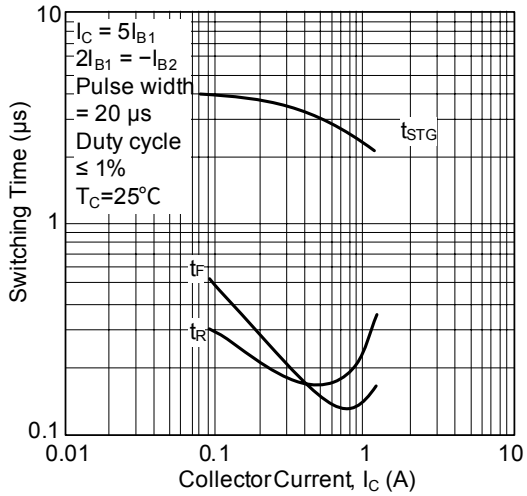
$V_{CE(SAT)}$ - I_C



$V_{CE(SAT)}$ - I_C



Switching Characteristics



■ TYPICAL CHARACTERISTICS(Cont.)